

line 13; zygomatic breadth 11·2; breadth between preorbital processes 7·4; interorbital constriction 3·8; greatest mastoid breadth 10·2; height from basion to top of brain-case 4; palatal length in middle line 5·9; front of canine to back of  $m^3$  6; front of lower canine to back of  $m_3$  6·6.

*Hab.* N.E. Africa, between Adis Ababa and Lake Rudolf.

*Type.* Adult male. Presented by W. N. McMillan, Esq. Collected by Ph. C. Zaphiro. Seven specimens examined.

The peculiar flattening of the head of this bat—even to the abolition of the sagittal crest and the reduction in the vertical thickness of the lower jaw—probably indicates that it either lives in small cracks in trees or rocks, into which it may creep beyond reach of enemies, or else that it frequents some large-leaved plant (such as banana or cactus), between whose leaves the other bat with a similarly shagreened forearm (*Vespertilio Floweri*) was found by Mr. N. C. Rothschild.

I have named this most interesting bat in honour of Mr. W. N. McMillan, to whose liberality science is indebted for the exploration of which it is part of the outcome.

---

LXVI.—*A Dwarf Form of the African Elephant.*

By Prof. TH. NOACK, of Brunswick\*.

In the summer of 1905 Herr C. Hagenbeck, of Stellingen, received a small elephant from the French Congo which differs not merely from the varieties of *Elephas africanus* described by Prof. Matschie, but from all living elephants in that it represents a dwarf form.

I propose for it the name *Elephas africanus pumilio*.

The animal was 120 cm. high at the shoulder (in the lumbar region naturally higher), and was consequently about as large as the two young African elephants figured by Heck in 'Lebende Tiere,' pp. 116 and 117, which are the types of Matschie's *Elephas cyclotis* and *E. oxyotis*. The height of the young elephant from the Cameroons in particular is stated by Dr. Heck to be also 120 cm.

In my opinion these elephants were about a year and a half old. Since they were both, as also *Elephas pumilio*, of which, through the kindness of Herr Hagenbeck, I possess two beautiful photographs, photographed together with a keeper, it is possible to form a very good estimate of their

\* Translated by E. E. Austen from the 'Zoologischer Anzeiger,' Ed. xxix. No. 20 (Jan. 8, 1906), pp. 631-633.

dimensions. A new-born Indian elephant is about 90 cm. high; in the case of the African elephant trustworthy statements are wanting.

The age of *E. pumilio* was estimated by Herr Hagenbeck, who is an authority upon elephants, at about six years. It was consequently only as large as young of *E. africanus* about one year and a half old. The dorsal ridge of a six-year old Indian elephant already reaches to the chin of a full-grown man, and the young African elephant stands much higher on its legs than the Asiatic animal of equal age.

The estimate of its age depends upon the fact that this dwarf elephant already possessed tusks protruding to a length of about 12 cm., relatively strong, sharply pointed, and directed entirely outwards and obliquely downwards, not forwards; the tusks are consequently very remarkable in their direction also. In the photograph of the *E. cyclotis* of the same size there is to be seen merely a small and scarcely visible stump of a tusk, while in that of *E. oxyotis* there is no trace of one whatever.

Moreover, the development of the front leg was that of an older elephant, not of a yearling.

In the quite young African elephant the forearm is relatively shorter and the upper arm relatively longer than in the adult state, as appears from the two illustrations referred to, which have been compared with adult specimens, as also from the development of an elephant from the Cameroons in the Hamburg Zoological Gardens, which I have been able to follow for a period of about ten years, and of which I possess original drawings.

The shape of the front limb in the specimen of *E. pumilio*, however, was that of an older and not that of a quite young animal.

The shape of the rest of the body—apart from the long and remarkably thin tail, on which the double row of hairs forming the small end-tuft consisted of some longer ones in front and only a few shorter ones behind—was as far as the shoulder similar to that of the elephant from the Cameroons figured by Heck, but differed considerably from the neck onwards.

*Elephas pumilio* carries its head decidedly lower than *E. cyclotis*; on both sides of the head, nearer the base of the ear than the eye, there is situated a prominent protuberance, similar to what is found in the case of the Asiatic elephant; the zygomatic arch is remarkably feebly marked, and the shape of the ear differs from that of all known African elephants.

The ear is remarkably small and its transverse diameter is more than a quarter less than that of a specimen from the Cameroons of equal size. The shape is also entirely different. In the case of the young Cameroons elephant the anterior margin projects in a flat curve behind the base of the ear, the posterior half of the ear forms almost a semicircle, the lower margin is straight, and the anterior lower lobe is rectangular. This is the type of *Elephas cyclotis*. In the case of *E. oxyotis* the upper margin of the ear is perfectly straight, while the anterior lobe is produced forwards into a point.

In *E. pumilio*, on the other hand, the anterior upper part of the ear is sharply marked off from the ear-base in a decided curve, and the upper margin runs in a flat curve obliquely backwards and downwards, so that the posterior half of the ear amounts to much less than a semicircle, and the posterior margin is rounded off below in a much shallower curve than in the case of *E. cyclotis*.

The lower margin of the ear is not straight, but before the middle curves inwards somewhat sharply, so that the anterior lobe has a decided downward direction. The lobe is not rectangular in shape, as in the case of the elephant from the Cameroons, but ends in a rounded point; consequently the anterior contour of the ear is not straight and short, as in *E. cyclotis*, but decidedly rounded and much longer than in the case of the latter.

The skin of *E. pumilio* is much smoother and less wrinkled than that of *E. cyclotis*, or, indeed, of any other African elephant. The trunk in particular is almost entirely without the transverse wrinkles characteristic of *E. africanus*, so that it resembles that of the Asiatic elephant. It diminishes but little towards the orifice; on the other hand, for about 10 cm. at the end it is very thin, and this portion is rather sharply marked off from the rest of the trunk. The orifice has thin edges.

Herr Hagenbeck and I were agreed that the animal in no way presented the appearance of being possibly stunted and backward, but that the impression that it gave us was that of a well-developed elephant, not very old, but at the same time not absolutely young. This first specimen of *Elephas pumilio*, which is undoubtedly of the greatest scientific interest, soon found a purchaser in North America.